

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently amended) A method for providing services with guaranteed Quality of Service (QoS) in an IP access network, comprising:

a. a service entity at ~~the~~ network service control layer obtaining the addresses of ~~the~~ calling subscriber and ~~the~~ called subscriber and QoS requirement for ~~the~~ a service through analyzing ~~the~~ a service request of the calling subscriber, then ~~applying for~~ requesting network resources to ~~corresponding~~ access network corresponding to the calling subscriber and the called subscriber, respectively;

b. after receiving requests, the edge routers of said the access network corresponding to the calling subscriber and the called subscriber judging whether enough resources can be provided for this service according to ~~the~~ current resource condition, if so, executing step c, otherwise rejecting the service request of the calling subscriber; and

c. if there are upward traffic streams of the access network in this service, ~~said the~~ edge router informing an access network end device of the QoS requirement for the service, the access network end device processing said traffic streams according to the QoS requirement;

~~if~~ there are downward traffic streams of the access network in this service, ~~said the~~ edge router setting priority in the access network for this service and forwarding said traffic streams.

2. (Currently amended) The method according to claim 1, wherein in step c, ~~said the~~ edge router can transform ~~the~~ service levels into priorities in the access network for the received ~~service-traffic~~ streams and forward said traffic streams; or can classify streams first, after identifying the traffic streams, transform the identified traffic results-streams into priorities in the access network and forward the traffic streams.

3. (Original) The method according to claim 1, wherein step C is executed after said edge router has informed the service entity at network service control layer that the access network can provide enough resources for the service and has received confirmation from the service entity.

4. (Currently amended) The method according to claim 1, further comprising ~~the a~~ step of said edge router obtaining at least topology structure of the access network and bandwidth resources of each interface through static configuration or dynamic management protocol.

5. (Currently amended) The method according to claim 1, after the access network end device receives QoS requirement of the service in step c, the method further comprising:

setting items of a stream classification table according to ~~the~~ parameters for identifying traffic streams in the QoS requirement;

classifying the received upward traffic streams of the calling subscriber; and

managing bandwidth according to bandwidth parameters for the ~~service-traffic~~ streams matched with the items of the stream classification table, and processing the other ~~service-traffic~~ streams as traffic streams without guaranteed QoS.

6. (Currently amended) The method according to claim 5, wherein the step of forwarding the matched service streams by end devices is comprises:

setting the ~~service~~ traffic streams with high priorities and then forwarding the traffic streams for Ethernet access or IP Digital Subscriber Line Access Multiplexer (DSLAM) access; and

sending the traffic streams to Permanent Virtual Circuit (PVC) with guaranteed QoS for further forwarding for ATM DSLAM access.

7. (Original) The method according to claim 5, wherein the parameters for identifying traffic streams can be a four-element group, a five-element group or a seven-element group.

8. (Currently amended) The method according to claim 1, further comprising: before receiving QoS parameters from the edge router of the access network for upward traffic streams, the end devices processing the received traffic streams from the calling subscriber as ~~service~~ traffic streams without guaranteed QoS.

9. (Currently amended) The method according to claim 4~~2~~, wherein the network devices between said access network end devices and said edge router of the access network forward the traffic streams according to the priorities of the traffic streams.

10. (Currently amended) The method according to claim 5, further comprising: after the calling subscriber terminates the service, if there are upward traffic streams, said edge router sending a QoS release command, the access network end devices deleting corresponding items of the stream classification table according to parameters of the said ~~command~~ parameters.

11. (Currently amended) The method according to claim 6, further comprising: after the calling subscriber terminates the service, if there are upward traffic streams, said edge router sending a QoS release command, the access network end devices deleting corresponding items of the stream classification table according to parameters ~~the of said~~ command-parameters.

12. (Currently amended) The method according to claim 7, further comprising: after the calling subscriber terminates the service, if there are upward traffic streams, said edge router sending a QoS release command, the access network end devices deleting corresponding items of the stream classification table according to parameters of the~~said~~ command-parameters.

13. (New) The method according to claim 5, wherein managing bandwidth according to bandwidth parameters comprises: performing bandwidth limitation, by the access network end device, according to bandwidth parameters.